

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) N-230

P1. Other Identifier: Physics Science Research Lab., Reacting Flow Environments Branch

***P2. Location:** ☒ Not for Publication ☐ Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** San Francisco North, Calif. **Date:** 1995

***c. Address** 350 Boyd Road

City Moffett Field

Zip 94035

***e. Other Locational Data:**

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building N-230 is a two-story office and laboratory building located along the north side of Boyd Road, between DeFrance and Mark Avenues. This building features a concrete foundation, concrete structural system and walls, a flat roof, and fenestration composed of three-panel aluminum-sash awning windows. Above these windows on the first and second floors are concrete canopies, which provide solar protection. The main entry is located on the south façade and is demarcated by a raked concrete facade, glazed aluminum doors, a glazed curtain wall, and a concrete canopy. Tests conducted at this facility include quantum electrodynamics, laser development and planetary atmosphere entry. The building is 31,500 sq. ft.

See Continuation Sheets for technical description.

This building appears to be in good condition.

***P3b. Resource Attributes:** (list attributes and codes) HP39 – Other: Research Laboratory and Office

***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5a. Photo



P5b. Photo: (view and date)
View of East Façade (8/04/05)

***P6. Date Constructed/Age and Sources:** 1960

***P7. Owner and Address:**
United States of America as
represented by National Aeronautics
and Space Administration (NASA)

***P8. Recorded by:**
Page & Turnbull, Inc.
724 Pine Street
San Francisco, CA 94108

***P9. Date Recorded:** 08/04/05

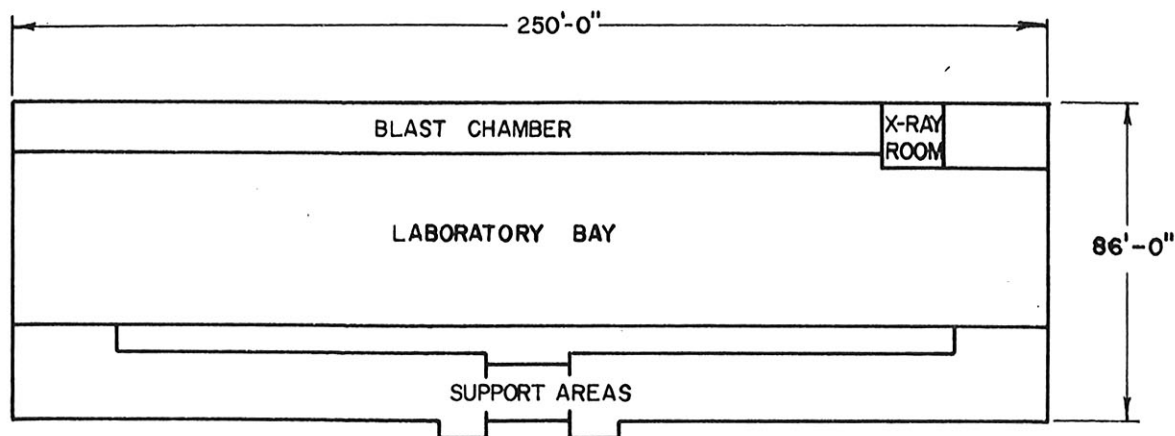
***P10. Survey Type:**
Reconnaissance

***P11. Report Citation:** National
Aeronautics and Space
Administration, *Technical Facilities
Catalog*, Volume 1, publication
NHB 8800.5A (1), October 1974;
Technical Information Division,

Ames Research Center, *Ames Research Facilities Summary*, 1974; Donald D. Baals and William R. Corliss, *Wind Tunnels of NASA*, NASA SP-440, 1981.

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (list)

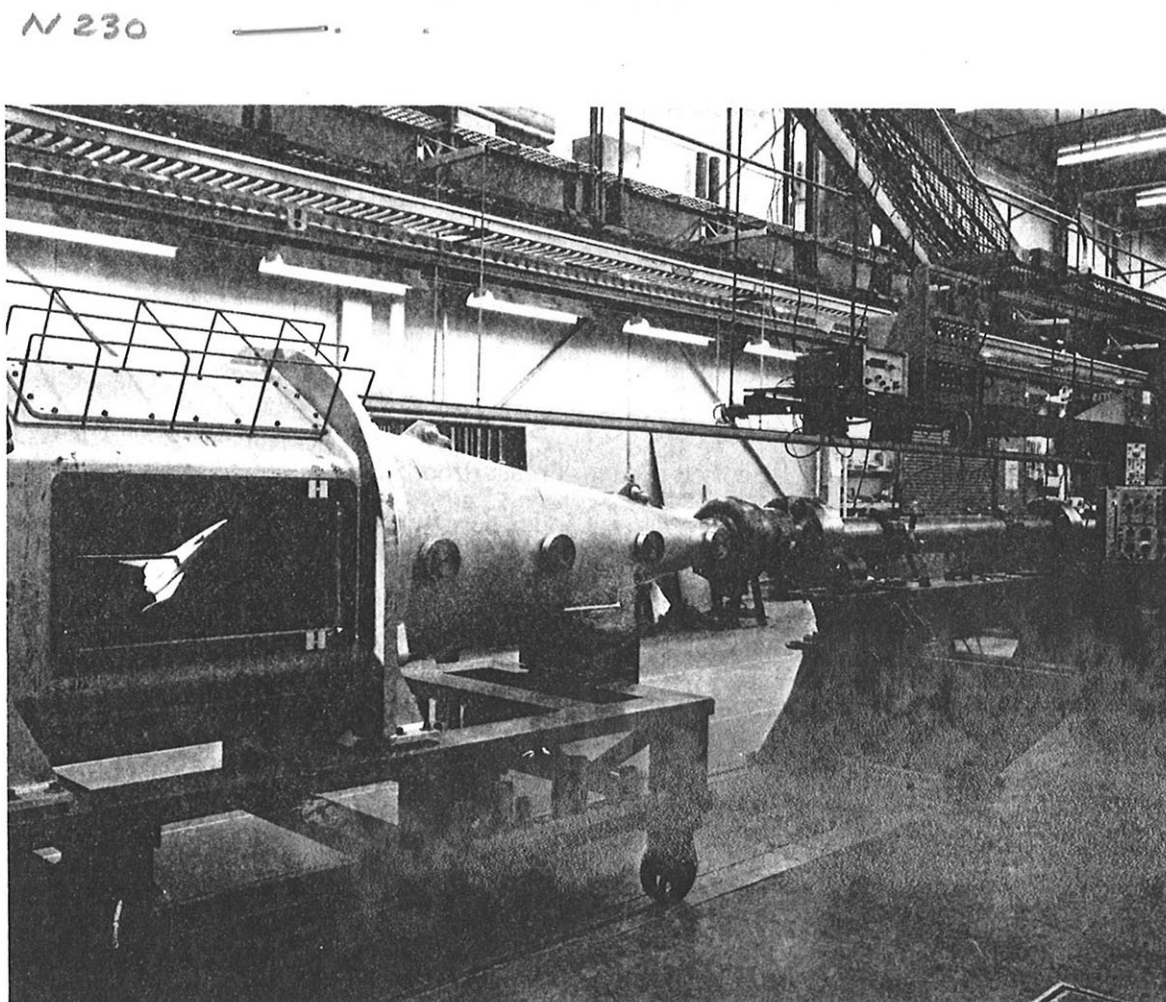
N 230



DESCRIPTION

The laboratory building contains a number of small laboratory rooms, a large (10,000 ft²) 2-story laboratory high bay, and a long shock-tube blast chamber with heavy concrete walls. The experimental facilities within the laboratory and their location are indicated below:

One-megajoule arc-discharge shock-tube plus capacitor power supply (enclosed in a 1-1/2-story room)	High bay area
Combustion-driven shock-tube	Blast chamber
3-meter grazing and normal incidence vacuum ultraviolet spectrometers on vibration isolated pads	Clean room in high bay area
1/2-meter normal incidence vacuum ultraviolet spectrometer	Small laboratory room
High power (>3 GW) Nd:glass (1.06 μ m wavelength) laser system.	Laser room
Various lasers (dye, ruby, He:Ne, and argon) used for plasma production and diagnosis	Laser room



DESCRIPTION

The 12-in. arc discharge shock tube is used for high-speed gas physics and chemical kinetics research. It consists of an exploding wire arc discharge driver which can be powered by a capacitor discharge of 1250, 2500, 3750, or 5000 μ F at voltages between 10 and 20 kV, 10^6 joules at maximum. This energy in the driver can produce shock velocities in the 12-in.-diameter driven tube between 2 and 25 km/sec. The tube is 50 ft long and is made of Type 304 stainless steel; its interior is honed to at least rms 16. The vacuum capability of better than 10^{-5} torr allows driven gas pressures as low as 10^{-2} torr without significant contamination.